GPS Walker

User Manual

Version 1.5

Feb. 2010

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Safety and Warnings

Turn the volume down before putting on the headphones. While listening to music, slowly increase the volume until you are comfortable with the sound.

Static Electricity

To avoid static electricity, do not use the player in an extremely dry environment. In an environment with electrostatic discharge, GPS Walker may get malfunction and require the user to reset the product.

USB Storage Device Data Protection

- Always insert the USB device in the correct direction. Failure to do so may result in damage to the USB device and GPS Walker.
- Do not remove the USB device whilst it is being accessed.
- Electrical interference and electrostatic discharges may cause the USB device to malfunction and suffer from damage and data loss.

Statement

- It is strongly recommended that any important data be backed up on a PC to protect against corruption, data loss or device malfunction. Please note that our company and the manufacture shall be not liable for any data loss or corruption.
- The operation of the player described in the manual may differ slightly from actual product. For better performance, it is subject to change without notice.

Introduction of the GPS Data logger

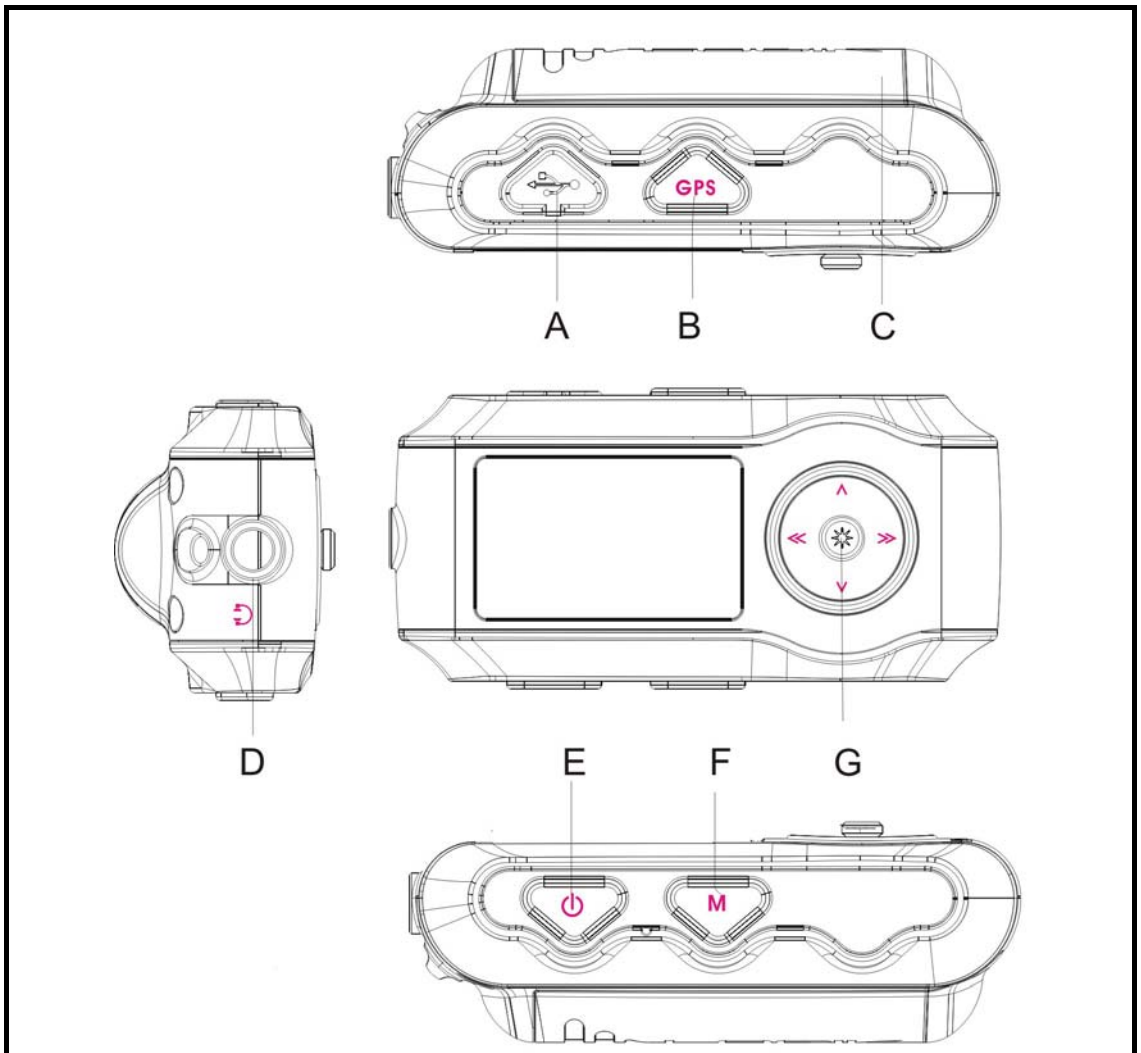
Features

- Point to point navigation
- 2GB memory size for continuous 2,000,000 GPS data log
- Manual setting frequency and minimum speed for logging
- Embedded SiRF Star III high sensitivity low power chip
- LCD indicator GPS status
- WMA/MP3 Player
- FM tuner
- Synchronous Lyric Display with MP3 Music
- Platform: Windows 2000/XP/Vista/Win 7
- USB 2.0 supported
- 128 x 64 Dots Matrix Display
- Superb Audio Quality
- Standard 3.5Φearphone
- One changeable AA battery

System Support

- Windows 2000/XP/Vista/Win 7, Mac OS 10.5.0 or later version

Keys and Ports



A. USB port	**G: Control key**	**: Play/Enter**
B. GPS power on/off		**<<: Left/Skip previous/Rewind**
C. Battery compartment		**>>:Right/Skip next/Forward**
D. Earphone socket		**∧: Up/Volume up**
E: Power on/off		**∨:Down/Volume down**
F: Menu		

Screen Display

A. Current track number / Total track number/Lyrics display B. Play/Pause C. Elapsed time D. Repeat mode	E. Equalizer F. GPS status G. Battery status H. Title

Transferring Data to Your GPS Data logger

1. Connect your GPS data logger to USB port by using USB cable. The data logger will show "Usb-connect" when it is connecting to a computer.
2. Right click on the folders and files you want to transfer to your GPS data logger, and select **Copy**.
3. Open the Removable Disk represented your GPS data logger, right click and select **Paste**.

Removing the GPS Data Logger from Your Computer

1. Click on the **Safely Remove Hardware** icon in the taskbar (next to the clock).
2. Click on **Safely Remove USB Mass Storage Device**.
3. Wait until a *Safe to Remove Hardware* message is displayed.
4. Remove the GPS data logger.

Listening to WMA/MP3 music files with the GPS logger

1. Follow the instructions to copy WMA/MP3 music files to the player.
2. Connect the supplied earphone to the earphone socket.
3. Press and hold the **Play** button for about 3 seconds to turn on the player.
4. Select **Music** and press the **Play** button to enter.
5. Select a folder or a music file and press the **Play** button.
6. Use the player controls to adjust playback and volume level to listen to your WMA/MP3 music.

Lyric Display Function

The GPS data logger supports lyric files in LRC format.

1. Prepare a MP3 or WMA music file. For example, happymusic.mp3;
2. Download a lyric file from the internet. The lyric file needs to be with an extension file name LRC. For example, happymusic-2004.lrc.
3. Rename the lyric file. For example, happymusic.lrc. This ensures that the GPS data logger connects the lyric filename with the corresponding music filename.
4. Copy the lyric file & music file to the GPS data logger.
5. The lyrics would be displayed on the screen, synchronous with the music.

Note:

- ***The GPS data logger supports LRC format only.***
- ***If the lyrics do not synchronize perfectly with the music, this is not a defect of the GPS data logger. Check the lyric file or download a better lyric file from the internet and try again.***

- ***Make sure the MP3 music file and LRC file are located in the same directory and the filenames are the same. If not, the data logger can not recognize the lyric file.***

Basic Operation

- Press and hold the **Power** ⏻ button for about 3 seconds to turn on the GPS data logger.
- In playing mode press the **Play** ☼ button to pause, or press it again to continue.
- Press (Λ/∨) buttons to increase/decrease volume.
- Press the **Skip** buttons (**<<** / **>>**) to skip to the previous or next song; press and hold the **Skip** buttons to rewind or fast forward the current song.
- Press the **Menu** button to go back to previous menu.
- To turn off the GPS data logger, press and hold the **Power** ⏻ button until the screen turns completely dark.

Hold Function

Use the Hold function to deactivate the GPS data logger controls (to avoid accidental activation).

1. To activate the hold function, press and hold the **Menu** button.

Locked

2. To deactivate the hold function, press and hold the **Menu** button.

Unlocked

Browsing the Main Menu

In the main menu, press the **Left** or **Right** button to select Menu options, and press the **Play** button to enter the menu. Press the **Menu** button to call up menu options or exit to the previous menu.

Menu Structure

Main menu	Submenu/Status	Submenu	Description
GPS	GPS Signal		Showing the GPS signal status
	Log Interval	Off/1Sec/3Sec/5Sec/10Sec/ 15Sec	Setting the GPS log interval
	Min Speed	Off/2KMH/4KMH/10KMH	Setting the GPS log minimum speed
	Mark		Marking the current position as a waypoint
	Mark &Go		Marking the current location as a waypoint and setting the waypoint as the destination in Compass menu
	Select Mark		Selecting a history waypoint, or setting a waypoint and a destination in Compass page
	Compass		Showing the GPS compass information, Direction to destination, Distance to destination, Current Speed and ID of destination
	GPS Power	Off/On	Turning the GPS on/off
	About		Showing the F/W version
Music			Playing music
FM	AddToPreset		Saving the current station to preset station
	LoadPreset		Loading the saved preset station
	Delete		Deleting one preset station
	AutoScan		Searching all available stations automatically
	ManuScan		Searching stations one by one manually
	Return		Returning to FM listening interface
Time			Displaying time
Settings	Equalizer	Normal/Classic/Pop/Jazz /Xbass/Rock	Setting sound effect in music playback
	Repeat	Normal/Repeat One/Repeat All/Random/Random All	Setting repeat mode of music
	Backlight	3Sec/5Sec/10Sec/15Sec/ Always On	Setting the duration of the backlight
	Brightness	0/1/2/3/4/5	Setting the brightness level
	Contrast	0/1/2/3/4/5	Setting the contrast level
	SetTime		Setting time
	Language	English/ Simple Chinese/ Traditional Chinese	Selecting a language
	FM Band	87.5~108MHz 76~90MHz	Selecting a FM bandwidth
	About		Logger information
	Default		Resetting to factory default

Music

1. Select **Music** in the main menu and press the **Play** button to enter.
2. Press the **Up** or **Down** button to choose a song or folder.
3. Press the **Play** button to enter a folder or play music.

FM

The GPS data logger allows you to listen to FM radio with the built-in digital FM tuner.

Note: The earphones must be connected to the GPS data logger otherwise the FM tuner will not be able to scan any FM station.

Start the FM Tuner

To switch to FM radio mode, select **Radio** in the main menu and press the **Play** button.

If there is no station on the default list, press the **Play** button and select **AutoScan** to search all available stations. After auto search is finished, press the **Left** or **Right** button to listen to another station.

A. FM icon
B. Auto scan /manual scan
C. Preset station number
D. Frequency
E. Battery indicator

Note: There are two FM bandwidth can be chosen, 87.5~108MHz and 76~90MHz (for Japan only). Enter the* Settings *menu to select the proper* FM Band*.

Using the FM Settings menu

To navigate the FM Settings menu in FM Radio mode, press the **Play** button to enter the FM Settings menu.

Item	Description
AddToPreset	Saving the current station to preset station.
LoadPreset	Loading the saved preset station.
Delete	Deleting one preset station.
AutoScan	Searching all available stations automatically.
ManuScan	Searching stations one by one manually.
Return	Returning to FM listening interface

Tuning into FM radio stations manually

To tune manually, press the **Left** or **Right** button. Each time when the buttons are pressed, the GPS data logger changes the frequency by 0.1MHz.

Advanced Settings

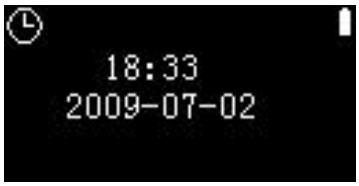
To navigate the Settings menu,

1. Select **Setting** in the main menu and press the **Play** button.
2. Press the **Up** or **Down** button to choose a setting and press the **Play** button to enter the submenu.
3. After setting is finished, press the **Menu** button to go back to the previous menu.

Settings	Equalizer	Normal/Classic/Pop/Jazz/Xbass/Rock	Setting sound effect in music playback
	Repeat	Normal/Repeat One/Repeat All/ Random/Random All	Setting repeat mode of music
	Backlight	3Sec/5Sec/10Sec/15Sec/Always On	Setting the duration of the backlight
	Brightness	0/1/2/3/4/5	Setting the brightness level
	Contrast	0/1/2/3/4/5	Setting the contrast level
	SetTime		Setting time
	Language	English/Simple Chinese/Traditional Chinese	Selecting a language
	FM Band	87.5~108MHz 76~90MHz	Selecting a FM bandwidth
	About		Logger information
	Default		Resetting to factory default

Time

Select Time in main menu, and press the play button to display current time.



To set time, go to Settings>SetTime,

1. Press the Play button.
2. Press the Left or Right button to set the time and date.
3. Press the Up or Down button to adjust the value of each item.
4. Press the Play button to confirm.

Format the GPS data logger by using the Windows Format Tool

1. Connect the GPS data logger to the computer.
2. Right click on the disk representing the GPS data logger.
3. Select format and start the formatting process.

Note: Do not select NTFS from the Format File System menu. Otherwise, the GPS data logger will not function, and you will need to format it again.

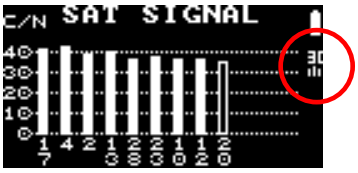
GPS

Menu options

GPS Menu	Description
GPS Power	Turning On/Off the GPS function.
GPS Signal	Showing the satellite signal strength. Need 3 solid bars for precise positioning.
	Press the **Play** button to show the **Sat View** Shows the satellite number being seen, satellite number being tracked.
	Press **Play** button again to show the **Position** Information such as Current Location coordinates, Date and Time will be shown.
Log Interval	Setting the time interval for GPS position logging. The data is logged in standard NMEA format.
Min Speed	Setting a value as the minimum speed for position logging. The system will log points only when the current speed is above this value. The minimum speed is valid only if Log Interval is enabled.
Mark	Marking the current location as a waypoint. This command is valid only when the current position fix is available (2D fix or 3D fix).
Mark&Go	Marking the current location as a waypoint and setting the waypoint as the destination in Compass menu. This command is valid only when the current position fix is available (2D fix or 3D fix).
Select Mark	Selecting a history waypoint, or setting a waypoint and a destination in Compass page. This command is valid only when the current position fix is available (2D fix or 3D fix).
Compass	Displaying following information: Direction to destination Distance to destination Current Speed ID of destination Follow the compass. It will guide you to the destination. This command is valid only when the current position fix is available (2D fix or 3D fix).
About	Information about the firmware version.

Before marking waypoints

1. Press the **Menu** button to enter main menu.
2. Select **GPS** in the main menu.
3. Power on the GPS function. Press the **UP** button to select **GPS Power**, select **On**, and then press the **Play** button to confirm.
4. Select **GPS Signal** in GPS menu. You will see some signal strength bars. The height of each bar represents the strength of the satellite signal. Wait until there are more than 3 bars appearing. The screen will show **2D** or **3D** when the signal is strong enough to position.

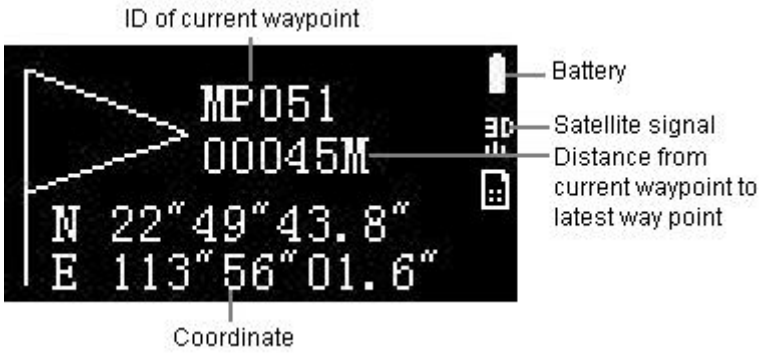


5. Press the **Play** button to show the **Sat View**; you will see the satellite number being seen, satellite number being tracked.
6. Press the **Play** button again to show the **Position**; you will see current position information (Latitude, Longitude, and UTC Time).
7. Press the **Menu** button to exit.

Marking waypoints manually

Select **Mark** in the GPS menu. The current location will be marked as a waypoint. You can manually mark waypoints wherever you want.

Note: the maximum number of waypoints is 1000.
Logging file is stored in the internal flash as be named GPS0XXXX.TXT; XXXX stands for a number from 0001 to 1000



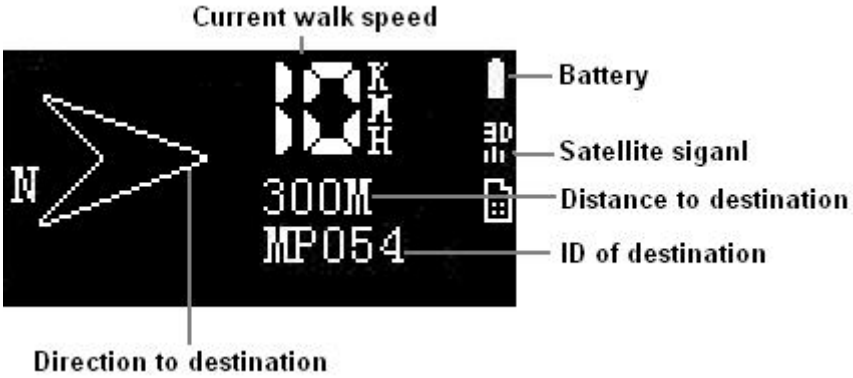
Logging GPS trace

You can use the GPS data logger to record the trip automatically, and view your trace on the Google map.

1. Select **Log Interval** in the GPS menu, and then select an interval to set the time interval for GPS position logging.
2. Select **Mini Speed** in the GPS menu, and then select a speed to set a value as the minimum speed for position Logging.
3. The system will mark trace log automatically in the interval when the current speed is above the min speed. The data is logged in standard NMEA format (*GPS_WPT.BIN)* in folder **GPS_DATA** on the internal flash of the GPS device.

Going to the marked waypoint

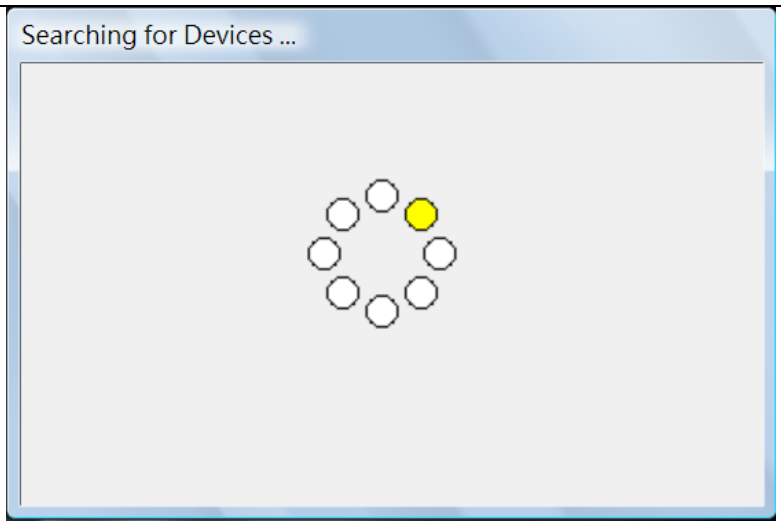
Select **Select Mark** to select a history waypoint or set a waypoint as the destination in Compass page. Follow the compass; it will guide you to the destination.

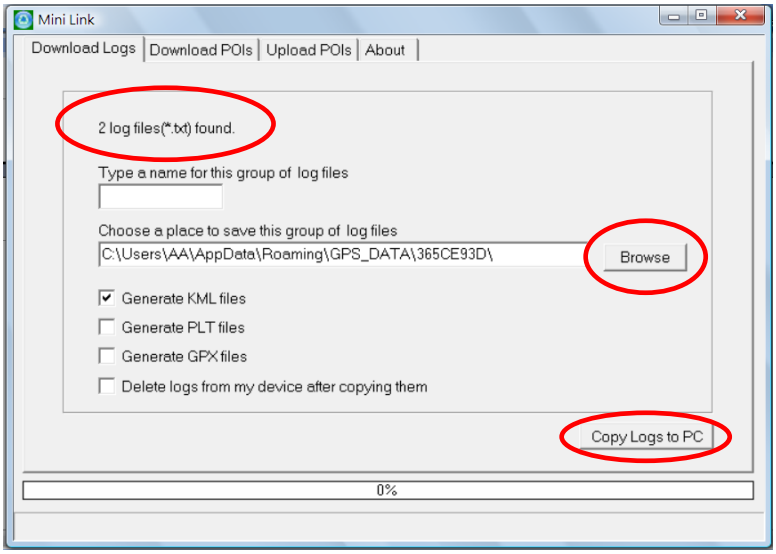


*Tip: Push the control key **up** to select the latest waypoint quickly.*

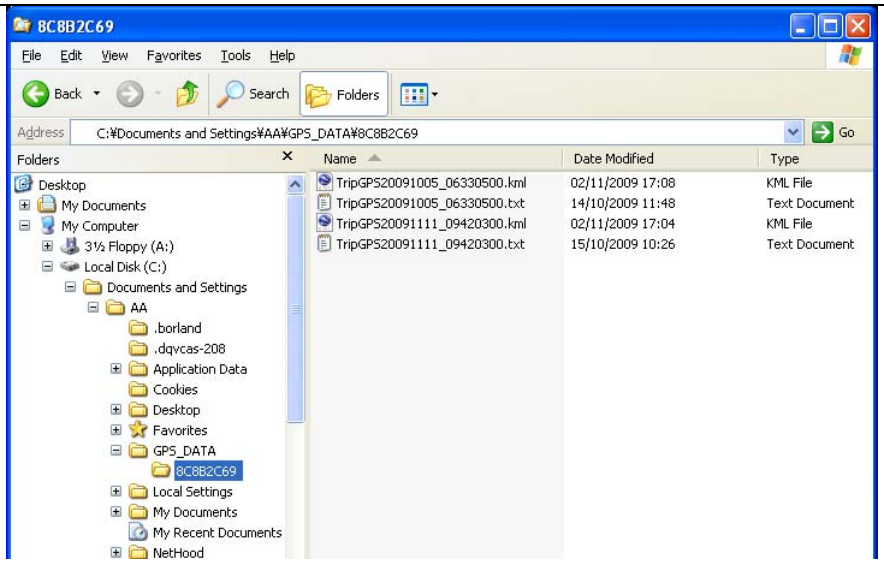
Viewing your trace on Google map

1. First we need records NMEA position data from the GPS data logger.
2. Select **GPS** in main menu, select **Log interval** and proper **Mini Speed** from the submenu to log the position where you are. You can mark other tracks by the same way. After the tracks have been marked, the device will create a record file "**GPS_WPT.bin**" on its internal flash.
3. Connect your device to a computer.
4. Run the software "MINILINK.exe". The screen shows the following information and the number of GPS log files are automatically shown.

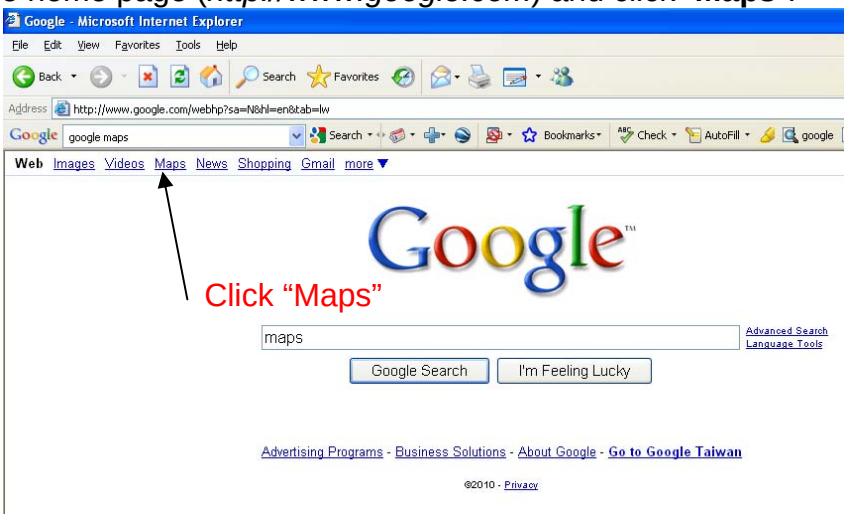




5. Type a name for this group of log files and choose a place to save them by clicking "**Browse**".
   - Select a file type which you want to transfer.
   - You can also delete these logs under this function.
   - Then click "**Copy Logs to PC**".
   - The folder in which you saved your log files will be open automatically.

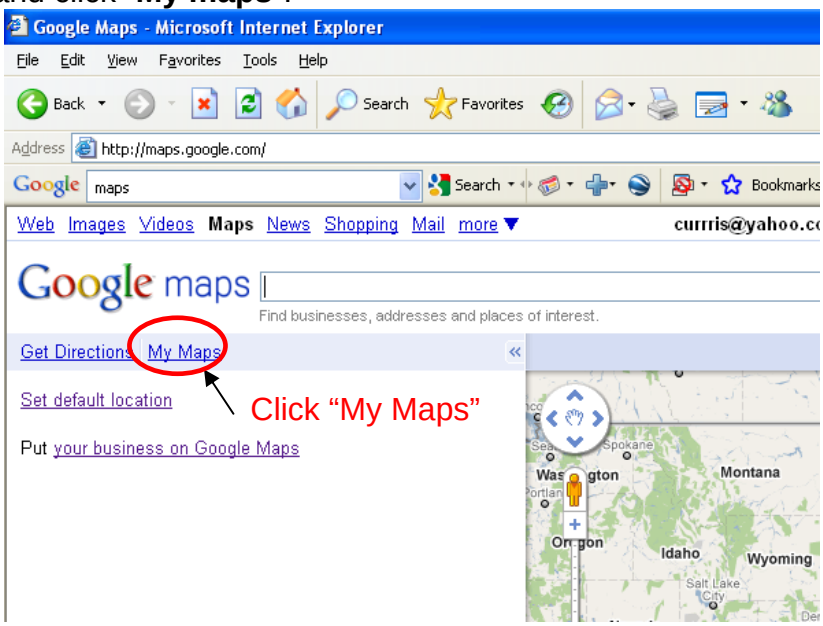


6. Go to Google home page (*http://www.google.com*) and click "**Maps**".

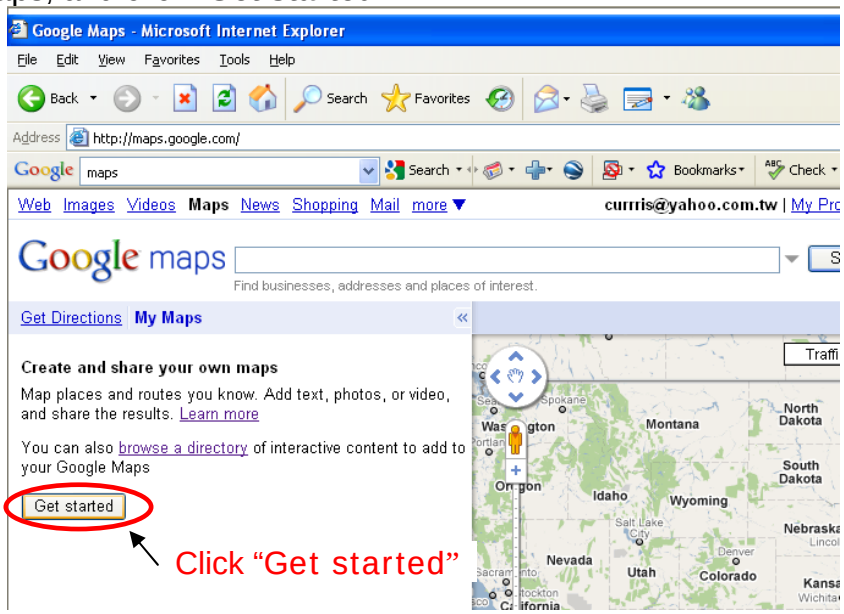

Google - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
Address http://www.google.com/webhp?sa=N&hl=en&tab=lw
Google google maps Search Bookmarks Check AutoFill google
Web Images Videos Maps News Shopping Gmail more
Click "Maps"
Google
maps
Advanced Search
Language Tools
Google Search
I'm Feeling Lucky
Advertising Programs - Business Solutions - About Google - Go to Google Taiwan
©2010 - Privacy

Note: You must register in Google website and sign in beforehand.

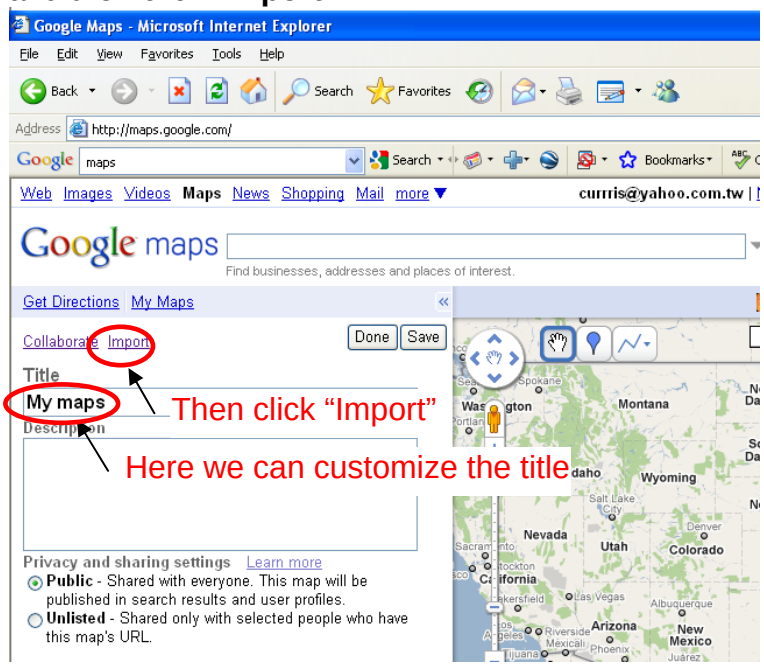
7. Go to Maps and click "**My maps**".



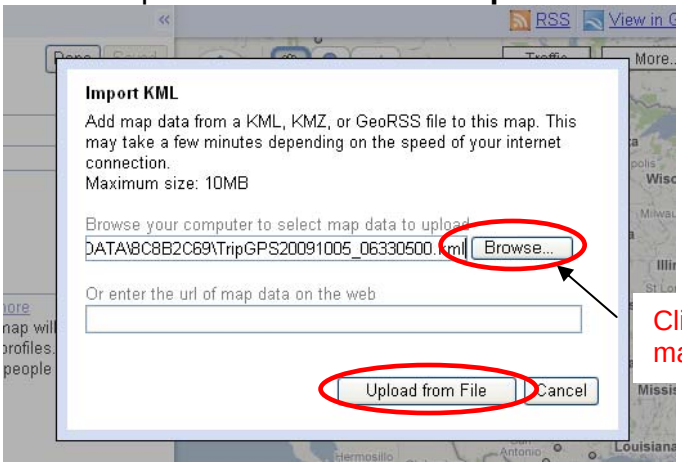
8. Go to My maps, and click “**Get started**”.


Google Maps - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
Address http://maps.google.com/
Google maps
Search Bookmarks Check
Web Images Videos Maps News Shopping Mail more
currris@yahoo.com.tw | My Pro
Google maps
Find businesses, addresses and places of interest.
Get Directions My Maps
Create and share your own maps
Map places and routes you know. Add text, photos, or video, and share the results. Learn more
You can also browse a directory of interactive content to add to your Google Maps
Get started
Click “Get started”
Montana
North Dakota
South Dakota
Idaho
Wyoming
Nebraska
Nevada
Utah
Colorado

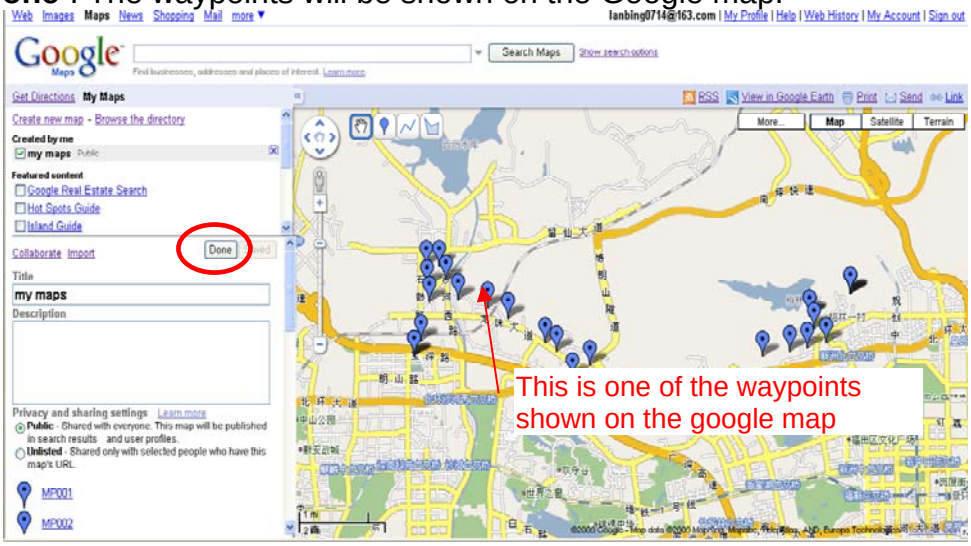
9. Type map title, and then click “**Import**”.



10. Click “**Browse**” to select map data. And then click “**Upload from file**”.


RSS
Import KML
Add map data from a KML, KMZ, or GeoRSS file to this map. This may take a few minutes depending on the speed of your internet connection.
Maximum size: 10MB
Browse your computer to select map data to upload
DATA\8C8B2C69\TripGPS20091005_06330500.kml
Browse...
Or enter the url of map data on the web
Upload from File
Cancel
Click “Browse” button to select map data (Converted kml file)

11. Click “**Done**”. The waypoints will be shown on the Google map.

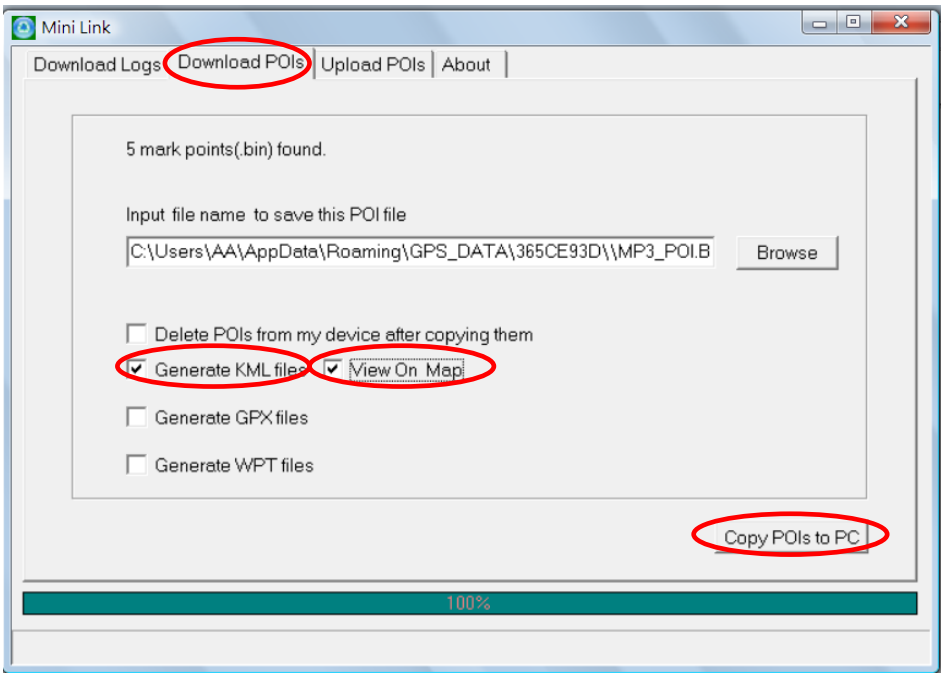


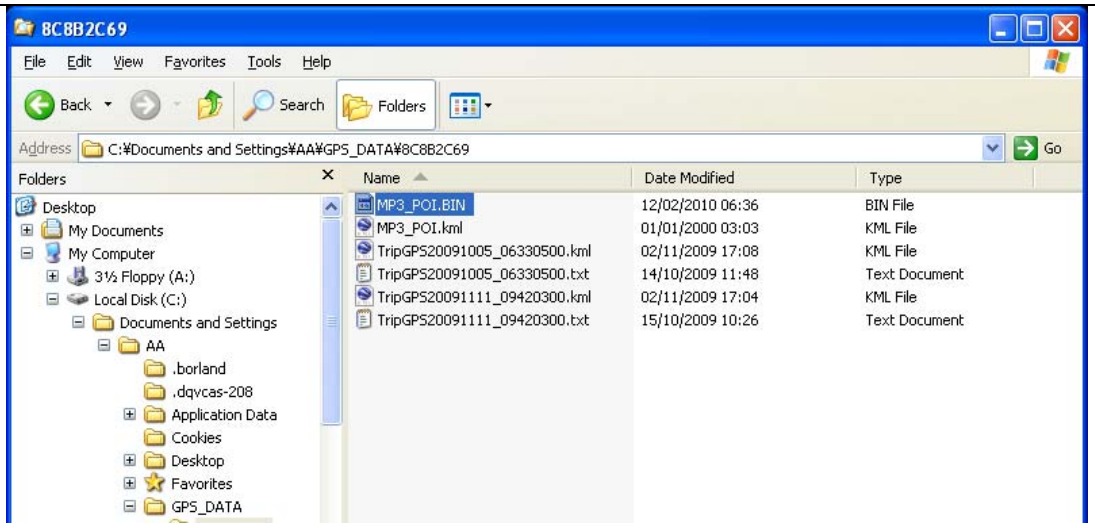
Download POIs and Viewing them on Google map

- Input a file name.
- Click “**Browse**” to select a folder to save the POI.
- Choose a format. If you choose KML, the POIs can be viewed on Google earth directly; and you can also view them on Google map directly by marking the **View on map**.

Note: You must download Google earth beforehand.

- Click “**Copy POIs to PC**”.
- The POIs have been downloaded to the destination folder.



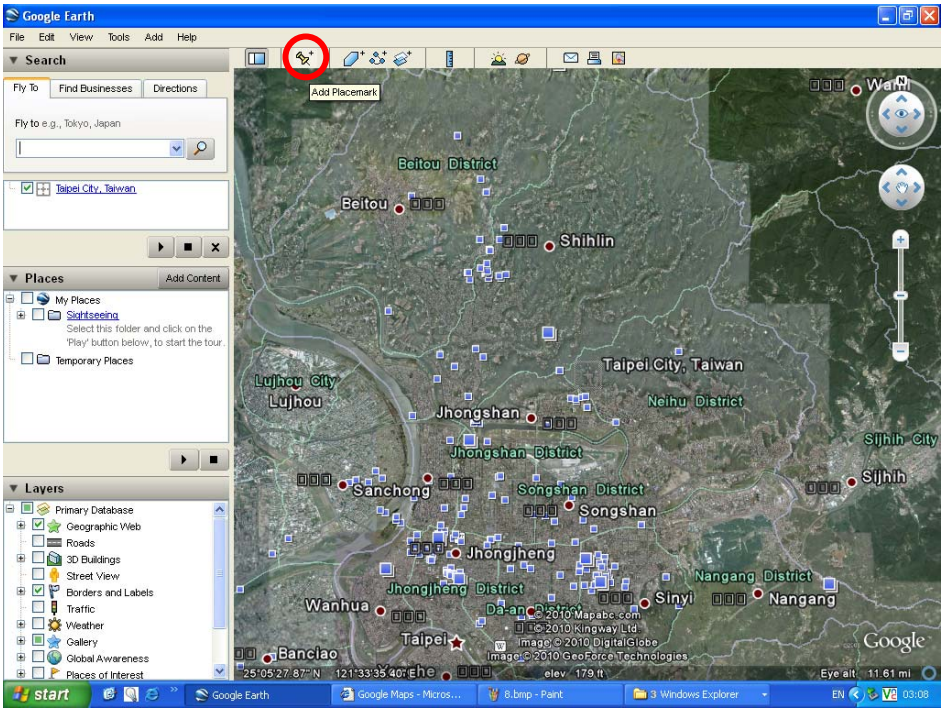


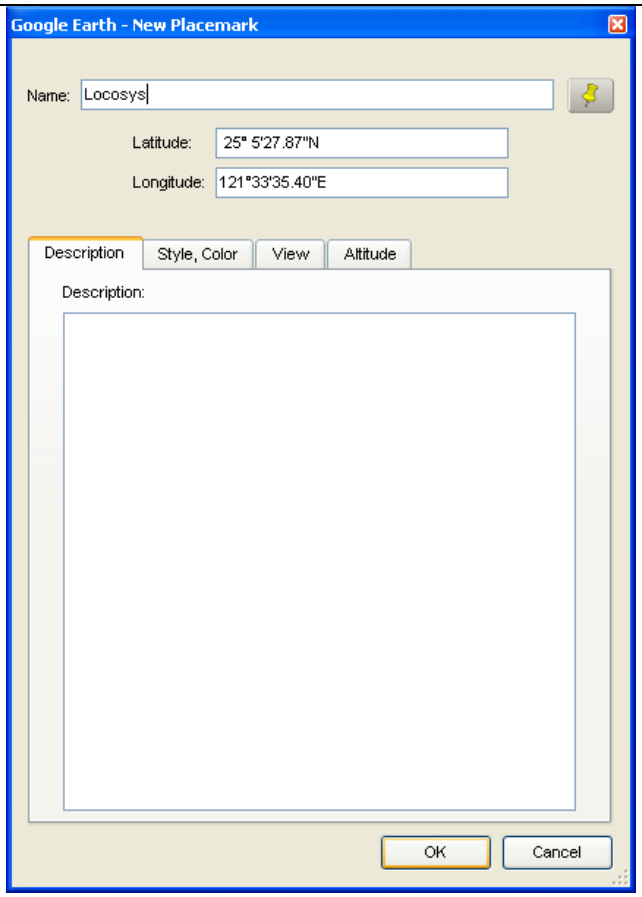
Uploading POIs to GPS data logger

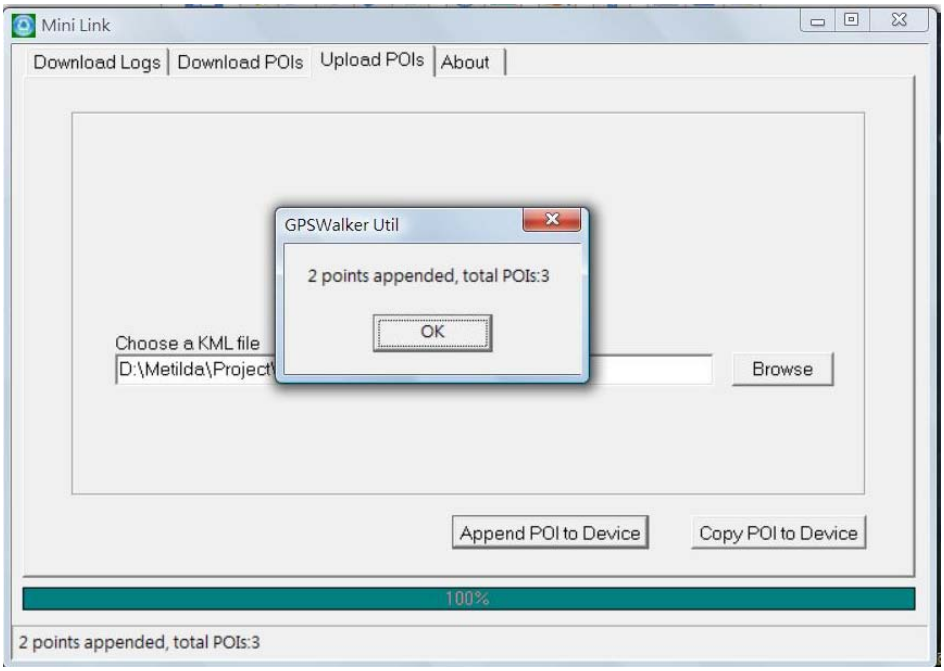
- Choose a waypoint in KML file from Google earth or other map application.
- You can choose **Append POI to Device** or **Copy POI to Device**
- **Append POI to Device** will append new mark points to device, maximum 1000 points, and mark points in device will be overwritten by choosing **Copy POI to Device**.
- You can set a POI as a destination by selecting **Mark**.

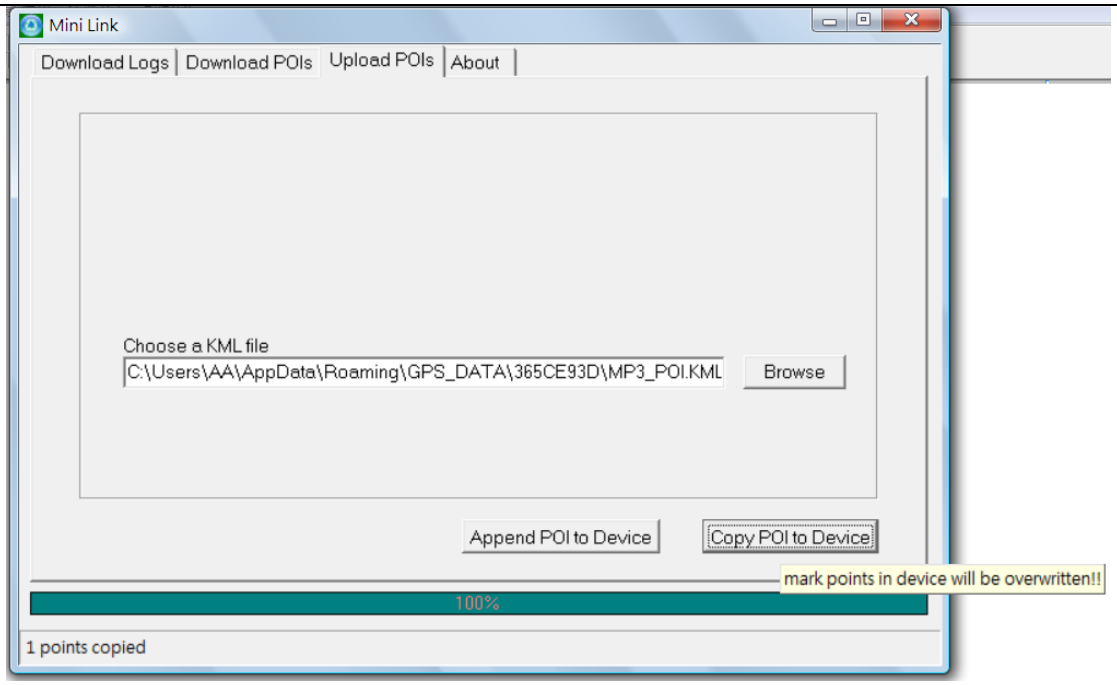
To catch a KML file from Google as a POI, follow the steps:

- Use "**New Mark**" to add a new mark
- Save it as a KML file and use the Upload function of MINILINK




Google Earth - New Placemark
Name: Locosys
Latitude: 25° 5'27.87"N
Longitude: 121°33'35.40"E
Description
Style, Color
View
Altitude
Description:
OK
Cancel


Mini Link
Download Logs
Download POIs
Upload POIs
About
GPSWalker Util
2 points appended, total POIs:3
OK
Choose a KML file
D:\Metilda\Project\
Browse
Append POI to Device
Copy POI to Device
100%
2 points appended, total POIs:3

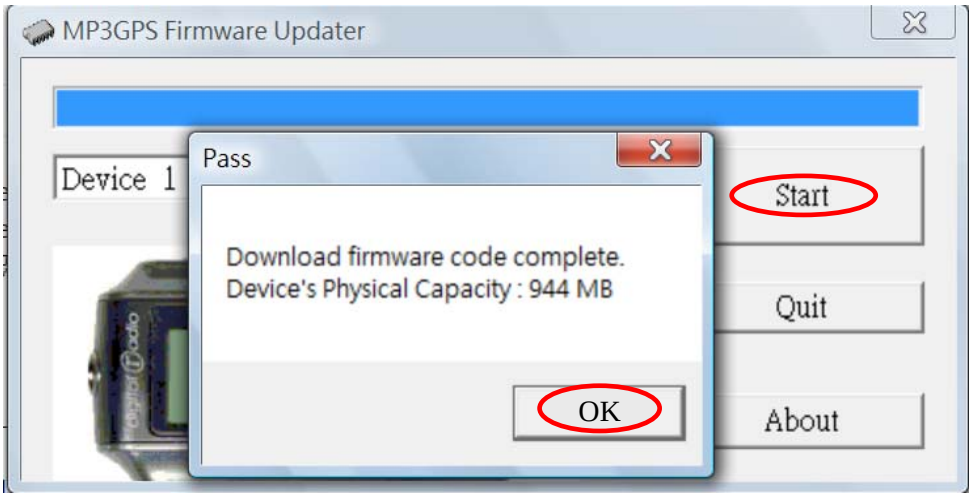


Checking F/W version

- The F/W information is shown in it

Upgrading GPS Walker F/W

- Connect with a PC.
- Run the MP3Updater.exe. After the device is shown, click "**Start**"
- Click "**OK**" after the Pass information is shown.



Battery

- For standalone applications, install a 1.5V AA battery into the battery compartment first.
- Changing the battery, if “LowPower” appears on screen or buttons do not response. The device shuts down automatically when the battery is low.
- The device playback, GPS on and standby time vary according to different types, brands and capacity of battery.
- Remove the battery to avoid damage caused by electrolyte leakage if the device is not going to be used for a long time.

CAUTION: Risk of explosion if battery is incorrectly replaced. Dispose of used batteries according to the manufacturer’s instruction”

Troubleshooting

Symptoms	Solutions
No sound	The volume level is too low to be heard. Increase the volume level by pressing the volume + button.
	The earphones may not be properly plugged into the earphone socket. Re-plug the earphones into the earphone socket carefully.
Intermission when playing music	The battery is low. Please replace the battery.
Sound distortion	The battery is very low. Please replace the battery.
Some music can’t be played back.	The music files may be in an incompatible format. Make sure the music files are in MP3 or WMA format.
No response to pressing buttons	The Hold function is activated. Press and hold the Menu button to deactivate it. The player may malfunction due to improper operation. Remove the battery and reinstall it to reset the player.
Can not turn on the player after formatting the player with windows format tool.	The player may have been formatted with the NTFS file system. Reformat the player into FAT or FAT32 file system with the same windows format tool.
Can not turn on the player.	The battery is dead. Charge the battery.
	There is not enough space for system files.
	Delete some files to free up space.
	The player may have malfunctioned due to improper operation. Remove the battery and reinstall it to reset the player.
Can not receive GPS signal	It can receive the GPS signal only in an open area.

GPS Data Logger Specifications

Navigation features				
Point to point navigation	Mark and Go			
Waypoints	1000 points			
Data logger	2,000,000 points			
Format support	Google Earth KML format supported Standard GPX format supported			
GPS performance				
Chip	SiRF Star III High Sensitivity			
Frequency	L1 1575.42MHz, C/A code			
Channels	Support 20 channels			
Update rate	1 Hz			
Acquisition time	Hot start (Open Sky)	< 2s		
	Cold start (Open Sky)	37s (typical)		
Position/Velocity	10m (2D RMS)/0.1 m/s without SA (autonomous mode)			
Dynamics	Speed (max.)	515 m/s		
	Altitude (max.)	18000 m		
	Acceleration (max.)	4 g		
Differential GPS	SBAS			
Antenna	Built-in patch antenna			
MP3				
Format	WMA/MP3			
Equalizer	Normal, rock, jazz, classic, pop, Xbass			
Music play mode	Normal, Repeat one, Repeat all, Shuffle, Repeat Shuffle			
Background playing	Support			
FM				
Auto / Manual Scan	Support			
20 Presets	Support			
Power				
Operation time	Battery type	non-rechargeable		rechargeable
		Zinc Carbon	Alkaline	Nickel Hydrogen NiH_2
	GPS data logger	2.7 ~ 3 hrs	6.7 ~ 11.7 hrs	9.7 ~ 12.5 hrs
	GPS data logger + MP3	2~ 2.5 hrs	5 ~ 9.5 hrs	9.2 ~ 10.7 hrs
	MP3	6.7 ~ 10 hrs	19.5 ~ 20.7 hrs	16.3 ~ 17.5 hrs
Note: The operation time is depending on battery brand, type and operation temperature. Most battery could reduce capacity at low temperatures. The operation hour of different battery type above is provided for reference only.				
Interfaces				
Language	ENGLISH, 繁體中文, 简体中文			
Data format	NMEA 0183 SiRF binary format (firmware upgradeable)			
USB connector	Mini USB			
Earphone jack	3.5mm			
OS support	Microsoft® Windows 2000/XP/Vista/Win 7 TM			

Storage Capacity	Built-in NAND flash	
Physical		
Size	80 x 37.8 x 26.6 mm	
Weight	35g (w/o battery)	
Display	Mode	Black/White, FSTN, Transflective
	Size	1.3inch (32mm x 16mm)
	Resolution	128W x 64H pixel
	Backlight	Blue
Environmental		
Operating temp.	-10°C ~ +40°C	
Storage temp.	-20°C ~ +55°C	
EMC standard	CE, FCC	
Accessories		
Standard	Earphone	
	USB cable	
	Neckstrap	
Optional	Strap	
	Arm strap	
Packing	Blister	

<Specifications are subject to change without notice>